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#2

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/955,866

DATE: 10/09/2001 TIME: 09:30:19

Input Set : A:\00759Aseq.txt

Output Set: N:\CRF3\10092001\I955866.raw

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3 <110> APPLICANT: Fox, Michael
             Sullivan, John K.
             Holst, Paige
     10 <130> FILE REFERENCE: 00,759-A
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/955,866
C--> 13 <141> CURRENT FILING DATE: 2001-09-19
    15 <150> PRIOR APPLICATION NUMBER: 60/233,867
    16 <151> PRIOR FILING DATE: 2000-09-20
    18 <160> NUMBER OF SEQ ID NOS: 30
    20 <170> SOFTWARE: PatentIn Ver. 2.0
    22 <210> SEQ ID NO: 1
    23 <211> LENGTH: 1209
    24 <212> TYPE: DNA
    25 <213> ORGANISM: Homo sapiens
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    31 <220> FEATURE:
    32 <221> NAME/KEY: sig_peptide
    33 <222> LOCATION: (33)..(89)
    35 <220> FEATURE:
    36 <221> NAME/KEY: misc_feature
    37 <222> LOCATION: (693)..(755)
    38 <223> OTHER INFORMATION: predicted transmembrane domain
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    42
                                          Met Ile Phe Leu Leu Met
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    45 ttg agc ctg gaa ttg cag ctt cac cag ata gca gct tta ttc aca gtg
                                                                       101
    46 Leu Ser Leu Glu Leu Gln Leu His Gln Ile Ala Ala Leu Phe Thr Val
    47
               10
    49 aca gtc cct aag gaa ctg tac ata ata gag cat ggc agc aat gtg acc
                                                                       149
    50 Thr Val Pro Lys Glu Leu Tyr Ile Ile Glu His Gly Ser Asn Val Thr
    53 ctg gaa tgc aac ttt gac act gga agt cat gtg aac ctt gga gca ata
                                                                       197
    54 Leu Glu Cys Asn Phe Asp Thr Gly Ser His Val Asn Leu Gly Ala Ile
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      40
                                               50
    57 aca gcc agt ttg caa aag gtg gaa aat gat aca tcc cca cac cgt gaa
                                                                       245
    58 Thr Ala Ser Leu Gln Lys Val Glu Asn Asp Thr Ser Pro His Arg Glu
    59
                                           65
    61 aga gcc act ttg ctg gag gag cag ctg ccc cta ggg aag gcc tcg ttc
                                                                       293
    62 Arg Ala Thr Leu Leu Glu Glu Gln Leu Pro Leu Gly Lys Ala Ser Phe
    63
                   75
                                       80
    65 cac ata cct caa gtc caa gtg agg gac gaa gga cag tac caa tgc ata
    66 His Ile Pro Gln Val Gln Val Arg Asp Glu Gly Gln Tyr Gln Cys Ile
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	atc	atc		qqq	atc	acc	taa		tac	aaσ	tac	cta		cta	aaa	atc	389
				Gly	-	-		-		_		_		_		-	303
71	110	105	*1*	011	,		110		-1-		-1-	115				,	
	aaa		tcc	tac	agg	aaa		aac	act	cac	atc		aaα	att	сса	gaa	437
		-		Tyr									_	_		-	137
	120	niu	DCI		пту	125	110	non	1111	1115	130	Licu	шуз	VUL	110	135	
		mat.	asa	gta	aaa		200	tac	car	act		aat	tat	cct	cta		485
		_		Val													403
79	1111	изр	GIU	Val	140	Бец	1111	СуЗ	GIII	145	1111	GLY	ı yı	110	150	AIG	
	αаа	αta	tcc	tgg		aac	atc	age	att		acc	aac	acc	age		tcc	533
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83	GIU	val	SEI	155	110	ASII	Vai	JCI	160	110	niu	ASII	1111	165	1113	DCI	
	200	200	aat	gaa	ααα	ata	+ 2.0	a a a		200	ant	att	ata		ot a	220	581
				Glu													201
	Arg	TIIT	170	GIU	GTA	Leu	тут	175	Vai	1111	ser	Val	180	Ary	ьeu	пуъ	
87				~~~	. ~ .		++-		+~+	~+~	++-	+~~		2 a t	a a a	~+~	629
				ggc	-			_	-								029
	PIO		PIO	Gly	Arg	ASII	190	ser	Cys	Val	Pile	11p	ASII	1111	птъ	Val	
91		185	a++	- at	++~	~~~		a++	~~~	a++			~~~	2+4	~~~	000	677
				act													677
	-	GIU	Leu	Thr	Leu		ser	TIE	ASP	Leu		ser	GIII	met	GIU		
	200		+		- a+	205	a+ ~	a++		a++	210	2+4		+	+~~	215	725
				cca			-								_		725
	Arg	Thr	HIS	Pro		ттр	Leu	Leu	HIS		Pne	TTE	Pro	ser	_	rre	
99				+.	220					225	. ~~.				230		772
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103				235					240					245			0.01
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107			250					255					260		++~-		. 074
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111		265					270							+	+		- 024
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	_		_		-				-	_			_			tctgaa	
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133					. Dha		. 17-7	or 1-	. 17-7	10				m	15		
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136)			20	,				25	,				30	1		





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Input Set : A:\00759Aseq.txt
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139			35	_				40		_		a 1	45	77- 7	a 1	
	His		Asn	Leu	GTA	Ala		Thr	АТа	Ser	Leu		гĀЗ	vaı	GIU	ASN
142		50	a	D		3	55	7	7 1 n	mbs	T 011	60	C1	Cl.	Cln	Tou
	_	Thr	ser	Pro	HIS		GIU	Arg	Ald	TILL	75	ьeu	GIU	GIU	GTII	80 Eeu
145	65	T 011	C1	Lys	712	70	Dho	uic	T10	Dro		Val	Gln	Va l	Δτα	
148	PIO	Leu	СТУ	пуъ	85	261	FIIC	штэ	116	90	GIII	vuı	OIII	vu.	95	пър
	Glu	Gly	Gln	Tyr	-	Cvs	Tle	Tle	Tle		Glv	Va 1	Ala	Trp	-	Tvr
151	Olu	OLY	0111	100	0111	C _I D	110		105	-1-				110	F	-1-
	Lvs	Tvr	Leu	Thr	Leu	Lvs	Val	Lvs	Ala	Ser	Tyr	Arq	Lys	Ile	Asn	Thr
154	1-	-1-	115					120			*	_	125			
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	145					150					155					160
162	Pro	Ala	Asn	Thr	Ser	His	Ser	Arg	Thr	Pro	Glu	Gly	Leu	\mathtt{Tyr}	Gln	Val
163					165					170					175	
165	Thr	Ser	Val	Leu	Arg	Leu	Lys	Pro		Pro	Gly	Arg	Asn		Ser	Cys
166				180	_	_	_		185	_		_		190		_
	Val	Phe		Asn	Thr	His	Val		Glu	Leu	Thr	Leu		Ser	He	Asp
169	_	- 1	195	a 1.		a 1	D	200	m1	T7.2 -	D 0	m b	205	T	T 0	TT å a
	Leu		Ser	Gln	Met	GIu		Arg	Thr	HIS	Pro		Trp	Leu	Leu	HIS
172	-1 -	210	-1 -	D		0	215	т1.	715	Dho	т1.	220 Dho	т10	7 l n	Thr	บาโ
		Pne	тте	Pro	ser	230	тте	тте	Ала	Pile	235	Pile	116	Ата	1111	240
	225	λΙα	Lau	Arg	T.v.c		T.e.u	Cve	Gln	T.v.c		Tur	Ser	Ser	Lvs	
178	116	нта	Leu	AIG	245	GIII	пец	Cys	GIII	250	БСи	- y -	JCI	DCI	255	mpp
	Thr	Thr	Lvs	Arg		Va 1	Thr	Thr	Thr		Ara	Glu	Val	Asn		Ala
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		Phe	Thr	Val		Val	Pro	Lys	GIu		Tyr	тте	тте	GIU		Gly
197	1		**- 1	m1	5	a1	C	3	Dh.a	10	mbs	C1	Com	TI d	15	A an
	ser	ASN	val	Thr	Leu	GIU	cys	ASII	25	азр	T IIT.	стА	ser	30	val	หอแ
200	T 017	C1**	лΊэ	20 Ile	Thr	λl =	Sar	T.e.u		T.vc	Val	Glu	Δen		Thr	Ser
202	ьeu	стА	35	тте	TIIT	тта	SGT	40	GIII	пур	Val	GIU	45	пор	1111	201
	Pro	Hic		Glu	Ara	Ala	Thr		Len	Glu	Glu	Gl n		Pro	Leu	Glv
205	110	50	**** 9	O L U	**** 9	u	55					60		0		1
	Lvs		Ser	Phe	His	Ile		Gln	Val	Gln	Val		Asp	Glu	Gly	Gln
209	65					70					75	,	-		_	80





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Output Set: N:\CRF3\10092001\1955866.raw

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215				100					105					110		
217	Lys	Val	Pro	Glu	Thr	Asp	Glu	Val	Glu	Leu	Thr	Cys	Gln	Ala	Thr	Gly
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	Tyr	Pro		Δla	Glu	Val	Ser		Pro	Asn	Va 1	Ser		Pro	Ala	Asn
221	тут	130	пец	AIG	GIU	Va.	135	111	110	21511	, 441	140	· u ·	110	1114	21011
	ml		***	a	3	m l		a 1	a1	T	m		1701	mh m		170 1
	Thr	ser	HIS	ser	Arg		Pro	GIU	СТУ	Leu		GIII	Val	THE	ser	
	145					150			_	_	155	_	_		_,	160
	Leu	Arg	Leu	Lys		Pro	Pro	GLY	Arg		Phe	Ser	Cys	Val		Trp
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229	Asn	Thr	His	Val	Arg	Glu	Leu	Thr	Leu	Ala	Ser	Ile	Asp	Leu	Gln	Ser
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232	Gln	Met	Glu	Pro	Arg	Thr	His	Pro	Thr	Trp	Leu	Leu	His	Ile	Phe	Ile
233			195		-			200					205			
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	225	БУЗ	GIII	пец	Cys	230	LyS	пси	- y -	DCI	235	פעם	тор	1111		240
		Dro	1757	mh x	mbr		Tvc	7 ~~	Clu	Wa I		Cor	λ1 a	T10		240
	Arg	PIO	Val	1111		T 11T	цуз	Arg	GIU		POII	361	Ата	тт́с		
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248 250 251 252	<213 <400 Met	3> 01)> S1 Gly	RGANI EQUEI His	ISM: NCE: Thr	4 Arg 5	Arg	Gln	Gly		10					15	
248 250 251 252 254 255	<213 <400 Met 1 Leu	3> OI)> SI Gly Asn	RGANI EQUEI His Phe	ISM: NCE: Thr Phe 20	4 Arg 5 Gln	Arg Leu	Gln Leu	Gly Val	Leu 25	10 Ala	Gly	Leu	Ser	His 30	15 Phe	Cys
248 250 251 252 254 255	<213 <400 Met	3> OI)> SI Gly Asn	RGANI EQUEI His Phe	ISM: NCE: Thr Phe 20	4 Arg 5 Gln	Arg Leu	Gln Leu	Gly Val	Leu 25	10 Ala	Gly	Leu	Ser	His 30	15 Phe	Cys
248 250 251 252 254 255	<213 <400 Met 1 Leu	3> OI)> SI Gly Asn	RGANI EQUEI His Phe	ISM: NCE: Thr Phe 20	4 Arg 5 Gln	Arg Leu	Gln Leu	Gly Val	Leu 25	10 Ala	Gly	Leu	Ser	His 30	15 Phe	Cys
248 250 251 252 254 255 257 258	<213 <400 Met 1 Leu Ser	3> OI 0> SI Gly Asn Gly	RGANI EQUEN His Phe Val 35	ISM: NCE: Thr Phe 20 Ile	4 Arg 5 Gln His	Arg Leu Val	Gln Leu Thr	Gly Val Lys 40	Leu 25 Glu	10 Ala Val	Gly Lys	Leu Glu	Ser Val 45	His 30 Ala	15 Phe Thr	Cys Leu
248 250 251 252 254 255 257 258 260	<213 <400 Met 1 Leu	3> OI 0> SI Gly Asn Gly	RGANI EQUEN His Phe Val 35	ISM: NCE: Thr Phe 20 Ile	4 Arg 5 Gln His	Arg Leu Val	Gln Leu Thr	Gly Val Lys 40	Leu 25 Glu	10 Ala Val	Gly Lys	Leu Glu	Ser Val 45	His 30 Ala	15 Phe Thr	Cys Leu
248 250 251 252 254 255 257 258 260 261	<213 <400 Met 1 Leu Ser	3> OH O> SH Gly Asn Gly Cys 50	RGANI EQUEN His Phe Val 35 Gly	ISM: NCE: Thr Phe 20 Ile	4 Arg 5 Gln His	Arg Leu Val	Gln Leu Thr Ser 55	Gly Val Lys 40 Val	Leu 25 Glu Glu	10 Ala Val Glu	Gly Lys Leu	Leu Glu Ala 60	Ser Val 45 Gln	His 30 Ala Thr	15 Phe Thr	Cys Leu Ile
248 250 251 252 254 255 257 258 260 261 263	<213 <400 Met 1 Leu Ser Ser	3> OH O> SH Gly Asn Gly Cys 50	RGANI EQUEN His Phe Val 35 Gly	ISM: NCE: Thr Phe 20 Ile	4 Arg 5 Gln His	Arg Leu Val Val	Gln Leu Thr Ser 55	Gly Val Lys 40 Val	Leu 25 Glu Glu	10 Ala Val Glu	Gly Lys Leu Thr	Leu Glu Ala 60	Ser Val 45 Gln	His 30 Ala Thr	15 Phe Thr	Cys Leu Ile Asp
248 250 251 252 254 255 257 258 260 261 263 264	<213 <400 Met 1 Leu Ser Ser Tyr 65	3> OH O)> SH Gly Asn Gly Cys 50 Trp	RGANI EQUEN His Phe Val 35 Gly	ISM: NCE: Thr Phe 20 Ile His	4 Arg 5 Gln His Asn	Arg Leu Val Val Lys 70	Gln Leu Thr Ser 55 Lys	Gly Val Lys 40 Val Met	Leu 25 Glu Glu Val	10 Ala Val Glu Leu	Gly Lys Leu Thr 75	Leu Glu Ala 60 Met	Ser Val 45 Gln Met	His 30 Ala Thr	15 Phe Thr Arg	Cys Leu Ile Asp 80
248 250 251 252 254 255 257 258 260 261 263 264 266	<213 <400 Met 1 Leu Ser Ser	3> OH O)> SH Gly Asn Gly Cys 50 Trp	RGANI EQUEN His Phe Val 35 Gly	ISM: NCE: Thr Phe 20 Ile His	4 Arg 5 Gln His Asn Glu Pro	Arg Leu Val Val Lys 70	Gln Leu Thr Ser 55 Lys	Gly Val Lys 40 Val Met	Leu 25 Glu Glu Val	10 Ala Val Glu Leu Arg	Gly Lys Leu Thr 75	Leu Glu Ala 60 Met	Ser Val 45 Gln Met	His 30 Ala Thr	15 Phe Thr Arg Gly Ile	Cys Leu Ile Asp 80
248 250 251 252 254 255 257 258 260 261 263 264 266 267	<213 <400 Met 1 Leu Ser Ser Tyr 65 Met	3> OI 0> SI Gly Asn Gly Cys 50 Trp	RGANI EQUEN His Phe Val 35 Gly Gln	ISM: NCE: Thr Phe 20 Ile His Lys	Arg 5 Gln His Asn Glu Pro 85	Arg Leu Val Val Lys 70 Glu	Gln Leu Thr Ser 55 Lys	Gly Val Lys 40 Val Met	Leu 25 Glu Glu Val Asn	10 Ala Val Glu Leu Arg 90	Gly Lys Leu Thr 75 Thr	Leu Glu Ala 60 Met Ile	Ser Val 45 Gln Met	His 30 Ala Thr Ser	15 Phe Thr Arg Gly Ile 95	Cys Leu Ile Asp 80 Thr
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248 250 251 252 254 255 257 258 260 261 263 264 266 267 269 270 272	<213 <400 Met 1 Leu Ser Ser Tyr 65 Met Asn Thr	3> OI)> SI Gly Asn Gly Cys 50 Trp Asn Asn	RGAN: EQUENTY HIS Phe Val 35 Gly Gln Ile Leu Glu 115	ISM: NCE: Thr Phe 20 Ile His Lys Trp Ser 100 Cys	Arg 5 Gln His Asn Glu Pro 85 Ile Val	Arg Leu Val Val Lys 70 Glu Val Val	Gln Leu Thr Ser 55 Lys Tyr Ile Leu	Gly Val Lys 40 Val Met Lys Leu Lys 120	Leu 25 Glu Glu Val Asn Ala 105 Tyr	10 Ala Val Glu Leu Arg 90 Leu Glu	Gly Lys Leu Thr 75 Thr Arg	Leu Glu Ala 60 Met Ile Pro	Ser Val 45 Gln Met Phe Ser Ala 125	His 30 Ala Thr Ser Asp Asp 110 Phe	15 Phe Thr Arg Gly Ile 95 Glu Lys	Cys Leu Ile Asp 80 Thr Gly Arg
248 250 251 252 254 255 257 258 260 261 263 264 266 267 269 270 272 273 275	<213 <400 Met 1 Leu Ser Ser Tyr 65 Met Asn	3> OI)> SI Gly Asn Gly Cys 50 Trp Asn Asn Tyr	RGAN: EQUENTY HIS Phe Val 35 Gly Gln Ile Leu Glu 115	ISM: NCE: Thr Phe 20 Ile His Lys Trp Ser 100 Cys	Arg 5 Gln His Asn Glu Pro 85 Ile Val	Arg Leu Val Val Lys 70 Glu Val Val	Gln Leu Thr Ser 55 Lys Tyr Ile Leu Thr	Gly Val Lys 40 Val Met Lys Leu Lys 120	Leu 25 Glu Glu Val Asn Ala 105 Tyr	10 Ala Val Glu Leu Arg 90 Leu Glu	Gly Lys Leu Thr 75 Thr Arg	Leu Glu Ala 60 Met Ile Pro Asp Ala	Ser Val 45 Gln Met Phe Ser Ala 125	His 30 Ala Thr Ser Asp Asp 110 Phe	15 Phe Thr Arg Gly Ile 95 Glu Lys	Cys Leu Ile Asp 80 Thr Gly Arg
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248 250 251 252 254 255 257 258 260 261 263 264 266 267 270 272 273 275 276 278	<213 <400 Met 1 Leu Ser Ser Tyr 65 Met Asn Thr Glu Pro	3> OI D> SI Gly Asn Gly Cys 50 Trp Asn Asn Tyr His 130	RGAN: EQUED His Phe Val 35 Gly Gln Ile Leu Glu 115 Leu	ISM: NCE: Thr Phe 20 Ile His Lys Trp Ser 100 Cys Ala	Arg 5 Gln His Asn Glu Pro 85 Ile Val Glu	Arg Leu Val Val Lys 70 Glu Val Val Val	Gln Leu Thr Ser 55 Lys Tyr Ile Leu Thr 135	Gly Val Lys 40 Val Met Lys Leu Lys 120 Leu	Leu 25 Glu Glu Val Asn Ala 105 Tyr	10 Ala Val Glu Leu Arg 90 Leu Glu Val	Gly Lys Leu Thr 75 Thr Arg Lys Lys Ser	Leu Glu Ala 60 Met Ile Pro Asp Ala 140	Ser Val 45 Gln Met Phe Ser Ala 125 Asp	His 30 Ala Thr Ser Asp 110 Phe	15 Phe Thr Arg Gly Ile 95 Glu Lys	Cys Leu Ile Asp 80 Thr Gly Arg Thr
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/955,866

TIME: 09:30:19

DATE: 10/09/2001

Input Set : $A:\00759Aseq.txt$

Output Set: N:\CRF3\10092001\I955866.raw

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306	Ala	Ala	Pro	Leu	Lys	Ile	Gln	Ala	Tyr	Phe	Asn	Glu	Thr	Ala	Asp	Leu
307				20					25					30		
	Pro	Cys		Phe	Ala	Asn	Ser		Asn	Gln	Ser	Leu	Ser	Glu	Leu	Val
310			35					40					45			
	Val		Trp	Gln	Asp	Gln		Asn	Leu	Val	Leu		Glu	Val	Tyr	Leu
313	~ 3	50		_		_	55	-	•	_	_	_60			_	
		Lys	Glu	Lys	Phe	_	Ser	Val	His	Ser	_	Tyr	Met	GLY	Arg	
316	65	D1		~	_	70	_	m1	_	_	75		_	_	~ 1	80
	ser	Pne	Asp	Ser	_	ser	Trp	Thr	ьeu	_	Leu	HIS	Asn	Leu		тте
319	T 110	7 an	T	C1	85	m	C1 n	Crra	т1 о	90	III a	mi a	T	Ta	95	mhm
322	пур	АЅР	гуѕ	Gly 100	ьeu	тут	GIII	Cys	105	тте	нтѕ	нтѕ	гуѕ	LуS 110	PIO	TIII
	G1v	Mot	Tlo	Arg	Tlo	Uic	Cln	Mat		Sor	Glu	T OU	Cor		LOU	λla
325	GLY	Mec	115	пту	116	птэ	GIII	120	ASII	SET	Gru	Leu	125	Val	ьец	Ата
	Asn	Phe		Gln	Pro	Glu	Tle		Pro	Tle	Ser	Asn		Thr	Glu	Agn
328	*****	130	501	0111	110	Olu	135	,	110	110	DCI	140			014	11011
	Val		Ile	Asn	Leu	Thr		Ser	Ser	Ile	His		Tvr	Pro	Glu	Pro
	145	-1-				150	-1-				155	1	-1-			160
333	Lys	Lys	Met	Ser	Val	Leu	Leu	Arg	Thr	Lys	Asn	Ser	Thr	Ile	Glu	Tyr
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	Pro	Trp	тте	Thr		vaı	Leu	Pro	Thr		тте	тте	Cys	val		val
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	Sor	Пtrac	T.sze	Cys	C117	Th∽	λαη	ሞኮም		C111	λνα	C1	C111	270	C111	C15
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358		290	-10	9	JIU	ביים	295	*****			Jiu	300	JC1	112P	JIU	
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/955,866

DATE: 10/09/2001 TIME: 09:30:20

Input Set : A:\00759Aseq.txt

Output Set: N:\CRF3\10092001\I955866.raw

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L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
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L:1146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
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L:1186 \ M:341 \ W: \ (46) \ "n" \ or "Xaa" \ used, for SEQ ID#:14
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/955,866

DATE: 10/09/2001 TIME: 09:30:20

Input Set : A:\00759Aseq.txt

Output Set: N:\CRF3\10092001\1955866.raw

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